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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,266	01/26/2004	Dennis Raymond Esterberg	200313035-1	6457

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EXAMINER

SEVER, ANDREW T

ART UNIT PAPER NUMBER

2851

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/763,266

Applicant(s)

ESTERBERG ET AL.

Examiner

Andrew T. Sever

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-23, 25-27 and 29-36 is/are rejected.
- 7) ☒ Claim(s) 13 and 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the surface that slides on a track of claim 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

With regards to the drawing correction applicant's arguments have been reviewed, however they are not sufficient to overcome the objection since the sliding portion is not labeled in the actual figures of the application and without actually labeling the drawings one of ordinary skill in the art would potentially assume the wrong part was the claimed sliding member as the office has done in the previous office action. It is suggested that applicant submit the informal drawing included in the arguments as a replacement drawing sheet. That would overcome the objection.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 36 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 36 is not understandable, it appears that applicant has made a typographical error which has resulted in an unintelligible claim. Since it is not know what per se is being claimed in claim 36, it will not be examined with regards to a prior art rejection.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 21, 25, 27, 33, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohmae et al. (US 6,755,554.)

Ohmae teaches in figures 19-22 a color wheel cartridge (211 in figure 21 and 192 in figure 19), comprising:

A readily removable color wheel housing (as shown in figure 19 the color wheel is encased within a housing that has a lid (191) and a body (192) which are readily disassembled (although not specifically specified to be provided for disassembling the addition of the O-ring 197 indicates that the cartridge is intended to be opened more than once) to potentially remove the color wheel or insert it) for receiving a color wheel (195), wherein the color wheel housing is configured to be readily removed from and inserted into an operative position (it should be noted that in figure 21 the entire cartridge is mounted into a projector housing on a stand and accordingly the wheel and cartridge could be removed without destroying the rest of the projector which meets the limitation of being readily removable), and the color wheel housing has a cutout portion (214 in

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figure 21 and 194 in figure 19) to permit light to be projected there through to impinge on only a portion of a color wheel disposed therein.

*With regards to applicant's claim 2:*

Ohmae teaches in column 26 lines 10 and 11 that a motor is included within the cartridge.

*With regards to applicant's claim 3:*

Clearly the opening exposes less than fifty percent of the color wheel to the light (it is smaller than half the color wheel.

*With regards to applicant's claim 21:*

See above the color wheel and color wheel cartridge have been shown to be readily replaceable by appropriate means (For example if the cartridge is secured to the projector via screws, the means would be a screw driver or if it is via rivets a hack saw will readily remove the cartridge and color wheel from the projector. (to place back in one either replaces the screws or puts in new rivets.)

*With regards to applicant's claim 25:*

See above.

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*With regards to applicant's claim 27:*

See figure 37, which is a prior art embodiment showing a reader (374 mounted in the projector) which reads a timing mark (373) on the color wheel.

*With regards to applicant's claim 33:*

The color wheel of Ohmae is adapted for selective disposition in a color wheel cartridge housing (it is shown inside the housing and therefor can be disposed.)

*With regards to applicant's claim 35:*

The color wheels include timing marks while the cartridge includes a reader, if the wheel was replaced the reader would potentially read slightly different timing marks.

*Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 4-12, 14-20, 22, 23, 26, 29-32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmae et al. as applied to claims 1-3, 21, 25, 27, 33, and 35 above, and further in view of Kunzman (US 6,392,717.)

As described in more detail above Ohmae teaches a color wheel cartridge, however Ohmae does not specifically teach the presence of memory (other than an index mark) in said cartridge or on the color wheel contained within. Kunzman teaches a color wheel and teaches in figure 1 part 22 a processor, which in column 8 lines 33-51 is taught to include EPROM for storing color wheel values. The inclusion of memory allows the



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color wheel to be tailored to the specific operation of an individual projector that it is mounted in (see column 2 lines 37-40) and is taught to be an improvement over the index mark and optical reader of Ohmae figure 37. Accordingly since light sources produce different amounts of brightness and/or projectors are used in different environments it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the memory (both that in the sensor board and the index mark) of Kunzman in the color wheel/color wheel cartridge of Ohmae so that the color wheel would have better performance that is specific to the projector it is used in. Further since the memory of Kunzman is mounted on the motor mount and Ohmae teaches that the motor mount is mounted inside the cartridge with (attached too) the color wheel, one of ordinary skill in the art at the time the invention was made would place the memory of Kunzman on a portion of the color wheel (specifically the motor mount part.)

*With regards to applicant's claims 5 and 6:*

See column 8 lines 33-51 of Kunzman.

*With regards to applicant's claims 7 and 8:*

See Kunzman column 11 lines 5-14 (and associated discussion in column 10) with respect to claim 7 and see column 9 lines 5-16 with regards to applicant's claim 8.

*With regards to applicant's claim 9:*

Kunzman teaches that the invention of Kunzman is an improvement over other prior art wheels that require the sensor to be moved into the light path, accordingly Kunzman teaches its invention is such that the data track is not exposed to projection light. (See column 8 lines 52-60.)

*With regards to applicant's claim 10:*

Ohmae clearly shows the index mark (a type of memory) disposed at or adjacent a center of the color wheel.

*With regards to applicant's claim 11:*

Kunzman clearly teaches that the index mark as well as the memory are necessary for proper functioning of Kunzman's projector accordingly it would be obvious to one of ordinary skill in the art at the time the invention was made to require said memory for authorizing the operation of the projector of Ohmae in view of Kunzman.

*With regards to applicant's claim 12:*

Since the memory of Kunzman is disposed within the color wheel cartridge it is disposed adjacent a perimeter of the color wheel.

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*With regards to applicant's claims 14-20*

See above. (The mounting hole is the hole by which the motor mounts its axel to the color wheel.)

*With regard to applicant's claim 22:*

See above, specifically with regards to applicant's claim 11.

*With regards to applicant's claim 23:*

Kunzman teaches a reader in column 8 lines 52-65.

*With regards to applicant's claim 26:*

See the with regards to applicant's claim 11 above.

*With regards to applicant's claim 29:*

See above.

*With regards to applicant's claim 30:*

See the with regards to applicant's claim 5 above.

*With regards to applicant's claim 31 and 32:*

The method of operating the projector of Inamoto in view of Kunzman is obvious since the projector itself is obvious as described above.

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*With regards to applicant's claim 34:*

It would be obvious that the projector would include logic for reading a memory on the color wheel as otherwise the memory would not be useable and Kunzman teach uses for the data stored in the memory.

***Allowable Subject Matter***

9. Claims 13, 24 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

10. Applicant's arguments with respect to claims 1-12, 14-27 and 29-36 have been considered but are moot in view of the new ground(s) of rejection.

The Inamoto reference has been replaced by Ohmae reference that meets the term readily removable as the word readily is ordinary understood (that the color wheel is removed without much difficulty.) Although the removing of Ohmae's cartridge and/or color wheel would probably require more effort/difficulty than applicant disclosed invention, it still meets applicant's claims except those specifically cited above as being potentially allowable, since Ohmae would only require common tools and removing the wheel/cartridge would not result in destroying the rest of the projector and/or at least half

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of the cartridge. Since the Ohmae rejection is a new grounds of rejection this office action has been made non-final.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

EP0749250 to Poradish et al. teaches in figure 1 a projector having a color wheel that is readily moved in and out of the optical path (see arrow next to the 15b indicator) which includes a timing circuit (18).

US 2004/0135975 to Wang teaches in figure 4 a color wheel 30 that is readily removable and inserted into an operative position.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "W B Perkey", with a long horizontal flourish extending to the right.

AS

**William Perkey**  
**Primary Examiner**